

Listing of Claims:

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1. (CURRENTLY AMENDED) An antenna, comprising:
- a number of antenna elements wherein said antenna elements are formed of conductive loaded resin-based materials, wherein said conductive loaded resin-based materials comprise micron conductive powders or micron conductive fibers; and electrical communication to said antenna elements.
2. (CANCELLED)
3. (CANCELLED)
4. (ORIGINAL) The antenna of claim 1 wherein said conductive loaded resin-based materials comprises petrochemicals.
5. (ORIGINAL) The antenna of claim 1 wherein said conductive loaded resin-based materials comprises silicones.
6. (ORIGINAL) The antenna of claim 1 wherein said conductive loaded resin-based materials comprises polyesters with woven or webbed micron conductive fibers forming a cloth like material.

7. (ORIGINAL) The antenna of claim 1 wherein said antenna elements are imbedded in a plastic case for portable electronic equipment.

8. (ORIGINAL) The antenna of claim 1 wherein said antenna elements are imbedded in vehicle window moldings.

9. (ORIGINAL) The antenna of claim 1 wherein said antenna can be a radiating antenna, a receiving antenna, or both.

10. (CURRENTLY AMENDED) An antenna, comprising:

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a first antenna element formed of conductive loaded resin-based materials,
wherein said conductive loaded resin-based materials comprise micron conductive
powders or micron conductive fibers;

a second antenna element formed of said conductive loaded resin-based materials;
and

electrical connections to said first antenna element and said second antenna
element.

11. (ORIGINAL) The antenna of claim 10 wherein said first antenna element and said second antenna element each have a length and a rectangular cross sectional area and are arranged in a dipole configuration.

~~13~~ 12. (CANCELLED)

[[14]] 13. (CANCELLED)

15 14. (ORIGINAL) The antenna of claim 10 wherein said conductive loaded resin-based materials comprises petrochemicals.

16 15. (ORIGINAL) The antenna of claim 10 wherein said conductive loaded resin-based materials comprises silicones.

17 16. (ORIGINAL) The antenna of claim 10 wherein said conductive loaded resin-based materials comprises polyesters with woven or webbed micron conductive fibers forming a cloth like material.

18 17. (ORIGINAL) The antenna of claim 10 wherein said first antenna element and said second antenna element are imbedded in a plastic case for portable electronic equipment.

19 18. (ORIGINAL) The antenna of claim 10 wherein said first antenna element and said second antenna element are embedded in an automobile bumper formed of insulating material.

20 19. (ORIGINAL) The antenna of claim ¹⁰~~1~~ wherein said first antenna element and said second antenna element are imbedded in vehicle window moldings.

~~21~~ 20. (ORIGINAL) The antenna of claim 10 wherein said antenna can be a radiating antenna, a receiving antenna, or both.

~~22~~ 21. (ORIGINAL) The antenna of claim 10 wherein said electrical connections comprise a coaxial cable having a center conductor and further comprising an amplifier connected between said first antenna element and said center conductor of said coaxial cable.

~~23~~ 22. (CURRENTLY AMENDED) An antenna, comprising:

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an antenna element formed of conductive loaded resin-based materials, wherein said conductive loaded resin-based materials comprise micron conductive powders or micron conductive fibers;

a conducting ground plane;

insulating material separating said antenna element from said ground plane; and
electrical connections to said antenna element and said ground plane.

[[24]] 23. (CURRENTLY AMENDED) The antenna of claim ~~23~~ 22 wherein said ground plane is formed of said conductive loaded resin-based materials.

~~25~~ 24. (CANCELLED)

~~26~~ 25. (CANCELLED)

27 26. (CURRENTLY AMENDED) The antenna of claim ~~23~~ 22 wherein said conductive loaded resin-based materials comprises petrochemicals.

28 27. (CURRENTLY AMENDED) The antenna of claim ~~23~~ 22 wherein said conductive loaded resin-based materials comprises silicones.

29 28. (CURRENTLY AMENDED) The antenna of claim ~~23~~ 22 wherein said conductive loaded resin-based materials comprises polyesters with woven or webbed micron conductive fibers forming a cloth like material.

30 29. (CURRENTLY AMENDED) The antenna of claim ~~23~~ 22 wherein said antenna can be a radiating antenna, a receiving antenna, or both.

31 30. (CURRENTLY AMENDED) The antenna of claim ~~23~~ 22 wherein said antenna element is perpendicular to said ground plane in a monopole configuration.

32 31. (CURRENTLY AMENDED) The antenna of claim ~~23~~ 22 wherein said antenna element is a rectangular plate parallel to said ground plane.

33 32. (CURRENTLY AMENDED) The antenna of claim ~~23~~ 22 wherein said antenna element and said ground plane are imbedded in a plastic case for portable electronic equipment.

41
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[[34]] 33. (CURRENTLY AMENDED) The antenna of claim 23 22 wherein said antenna element and said ground plane are imbedded in an automobile bumper formed of insulating material.

35 34. (CURRENTLY AMENDED) The antenna of claim 23 22 wherein said antenna element and said ground plane are imbedded in vehicle window moldings.

36 35. (CURRENTLY AMENDED) The antenna of claim 23 22 wherein said electrical connections comprise a coaxial cable having a center conductor and further comprising an amplifier connected between said antenna element and said center conductor of said coaxial cable.

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37 36. (CURRENTLY AMENDED) A method of forming an antenna, comprising:
forming a number of antenna elements from conductive loaded resin-based materials, wherein said conductive loaded resin-based materials comprise micron conductive powders or micron conductive fibers, using injection molding or extrusion;
arranging said antenna elements in an antenna array; and
forming electrical connections to said antenna elements.

38 37. (CURRENTLY AMENDED) The method of claim 37 36 wherein said antenna array forms a dipole antenna.

~~39~~ 38. (CURRENTLY AMENDED) The method of claim ~~37~~ 36 wherein said antenna array forms a monopole antenna.

[[40]] 39. (CURRENTLY AMENDED) The method of claim ~~37~~ 36 wherein said antenna elements are rectangular plates and said antenna array forms a patch antenna.

[[41]] 40. (CANCELLED)

[[42]] 41. (CANCELLED)

[[43]] 42. (CURRENTLY AMENDED) The method of claim ~~37~~ 36 wherein said conductive loaded resin-based materials comprises petrochemicals.

[[44]] 43. (CURRENTLY AMENDED) The method of claim ~~37~~ 36 wherein said conductive loaded resin-based materials comprises silicones.

[[45]] 44. (CURRENTLY AMENDED) The method of claim ~~37~~ 36 wherein said antenna can be a radiating antenna, a receiving antenna, or both.
